

# El Paso Community College

## Syllabus

### Part II

## Official Course Description

SUBJECT AREA	<u>Computer-Aided Design</u>								
COURSE RUBRIC AND NUMBER	<u>DFTG 2412</u>								
COURSE TITLE	<u>Technical Illustration and Presentation</u>								
COURSE CREDIT HOURS	<table><tr><td>4</td><td>3</td><td>:</td><td>3</td></tr><tr><td>Credits</td><td>Lec</td><td></td><td>Lab</td></tr></table>	4	3	:	3	Credits	Lec		Lab
4	3	:	3						
Credits	Lec		Lab						

### I. Catalog Description

Includes topics on pictorial drawings including isometrics, obliques, perspectives, charts, and graphs. Emphasizes rendering and using different media. **Prerequisite: DFTG 2332. (3:3).**

### II. Course Objectives

Upon satisfactory completion of this course, the student will be able to:

- A. Unit I. Introduction to Technical Illustration**
  - 1. Identify drafting practices necessary to produce quality drawings of a pictorial nature.
  - 2. Describe the various types of drawings used for technical illustrations and the pictorial methods of projection used to produce them.
  - 3. Import and export documents, e.g. .XREFS.
  - 4. Perform file management.
- B. Unit II. Axonometric Projection**
  - 1. Draw details of mechanical parts in isometric planes involving non-isometric lines (inclined and skewed planes) and isometric arcs and circles using CAD software.
  - 2. Draw isometric assemblies of machine parts involving non-isometric software lines (inclined and skewed planes) and isometric arcs and circles using CAD.
  - 3. Draw exploded pictorial assemblies of machine parts involving non-isometric software lines (inclined and skewed planes) and isometric arcs and circles using CAD.
  - 4. Create required schedules and B.O.M.
  - 5. Solve problems regarding design details.
- C. Unit III. Perspective Drawings**
  - 1. Draw a 2-D residential interior one point perspective drawing using CAD methods.
  - 2. Draw the exterior of an architectural commercial structure using two-point perspective and vanishing point method of projection.
  - 3. Develop a 3D model and set up perspective and parallel views using 3D modeling CAD software.
- D. Unit IV. Shade and Shadow**
  - 1. Identify and attach various materials and textures to previously created 3-D drawings.
  - 2. Create and distinguish between Ambient light, Point lights, Distant lights and Spot lights using 3-D CAD software.
  - 3. Create Views and Scenes in combination with lighting techniques to produce shadows onto previously created drawing.
  - 4. Install landscape objects from landscape library onto a previously created 3-D drawing.

5. Render previously created 3-D drawing depicting all exterior finish on elevations.
6. Create a rendered animation using previously created 3-D drawing.

### **III. THECB Learning Outcomes (WECM)**

1. Identify the processes used in technical illustration.
2. Produce pictorial drawings for use in technical presentation.

### **IV. Evaluation**

#### **A. Challenge Exam**

There is a challenge exam available for this course. Coordination for any challenge exam should be made through the Drafting Department Coordinator.

#### **B. Post-assessment**

1. The instructor will maintain a continuous record of each student's progress.
2. Students should be evaluated periodically throughout the semester.
3. The instructor will determine the weight of each graded assignment.
4. Instructors may require drawing assignments, quizzes, practical/written drawing exams, and formal exams.

#### **C. Grading Scale**

A	= 92.5 - 100
B	= 85.0 - 92.4
C	= 75.0 - 84.9
D	= 65.0 - 74.9
F	= below 65
I	= Incomplete
W	= Withdrew or Withdrawn

For grade percentage of individual assignments and exams refer to the Syllabus - Instructor's Course Requirements.

### **V. Disability Statement (Americans with Disabilities Act [ADA])**

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

### **VI. 6 Drop Rule**

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.